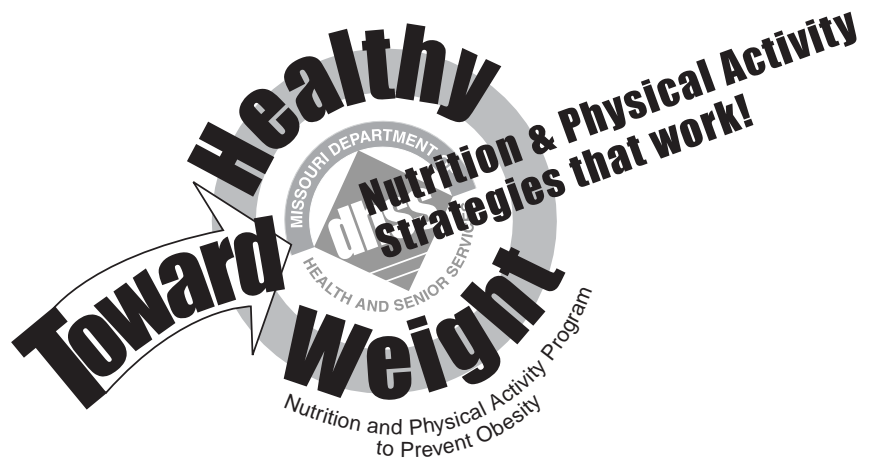


**Strategy for Reducing
Obesity and Other Chronic
Diseases:**

Increasing Physical Activity



Rationale

Regular physical activity has been shown by most studies to protect against weight gain and contribute to improved health.¹ Despite these benefits, only 45.1% of Missouri adults report engaging in recommended physical activity levels (i.e., either 30 minutes of moderate-intensity activity on 5 or more days per week or 20 minutes of vigorous-intensity physical activity on 3 or more days per week); 24.0% report no leisure-time regular physical activity (BRFSS 2003), and 28.4% of Missouri students in grades 9-12 are not engaged in regular physical activity (YRBSS 2003).

The Healthy People 2010 physical activity objectives for adults include decreasing sedentary behavior and increasing the proportion of adults who regularly engage in physical activities that enhance cardiorespiratory fitness, flexibility, and muscular strength and endurance.² Physical activity objectives for children and adolescents include increasing the proportion of adolescents who

regularly engage in physical activities that enhance cardiorespiratory fitness and improving the quality and quantity of physical education in schools. Further objectives include increasing community access to school physical activity facilities, increasing the availability of worksite physical activity programs, and increasing the proportion of trips made by walking and bicycling.

The Task Force on Community Preventive Services (The Community Guide) has issued the following recommendations for physical activity interventions.³ These are based on the strength of the evidence of effectiveness found through a systematic review of published studies conducted by a team of experts on behalf of the Task Force. A determination that there is “insufficient evidence to determine effectiveness” does not mean that the intervention does not work, but rather indicates that additional research is needed to determine whether or not the intervention is effective. Strategies that address environmental and policy

approaches to promoting and supporting physical activity, rather than strategies only directly promoting individual behavior change are more effective in improving health. Multiple levels of influence should be addressed. For example, improving facilities or increasing access to physical activity opportunities at school (e.g., restructuring playgrounds, creating and instituting policies related to the provision of equipment, etc.) are strategies that affect high levels of influence in a comprehensive approach. When strategies to directly promote individual behavior change are used, they should be delivered in conjunction with, or as an adjunct to, environmental and policy strategies. Similarly, when strategies designed to achieve short-term outcomes are used, they should be delivered in conjunction with more long-term strategies related to environmental and policy supports, or with a plan for sustaining or expanding the strategy beyond the period of current funding.⁴ An example is implementing walk-to-school

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programs, with a short-term objective of increasing the number of children walking/ biking to school by promoting supervised walking and biking (individual behavior change), and a long-term objective of sustaining and facilitating the choice to walk to school by improving permanent physical environment infrastructure and/ or by policy changes (e.g., addition or improvement of sidewalks, lighting, crosswalks, provision of crossing guards, regulation of traffic speed, etc).

Evidence-Based Interventions

Community-wide Campaigns

- Large-scale, intense, highly visible, community-wide campaigns with messages directed to large audiences through different types of media, including TV, radio, newspapers, movie theaters, billboards, and mailings.
- Part of a multi-component effort that also include strategies such as support or self-help groups, physical activity counseling, risk factor screening and education, community health fairs and other community events, and environmental or policy changes such as the creation of walking trails.

Point-of-Decision Prompts that Encourage People to Use Stairs

- Placing signs by elevators and escalators encouraging people to use nearby stairs for health benefits or weight loss.

Providing Social Support in Community Settings

- Change physical activity behavior through building, strengthening, and maintaining social networks that provide supportive relationships for behavior change (e.g., setting up a buddy system, making contracts with others to complete specified levels of physical activity, or setting up walking groups or other groups to provide friendship and support).
- Create new social networks or work within existing networks in a social setting outside the family, such as in the workplace.

Enhanced Physical Education (PE) Classes in Schools

- Increase the amount of time students spend doing moderate or vigorous activity in PE class. Change PE curricula by making classes longer or increasing activity time during class.
- Change the activities taught or modify the rules of the game so that students are more active.

Health Behavior Change Programs Adapted for Individual Needs

- Teach behavioral skills to help participants incorporate physical activity into their daily routines. The programs are tailored to each individual's specific interests, preferences, and readiness for change.
- Teach behavioral skills such as 1) goal-setting and self-monitoring of progress toward those goals, 2) building social support for new behaviors, 3) behavioral reinforcement through self-reward and positive self-talk, 4) structured problem solving to maintain the behavior change, and 5) prevention of relapse into sedentary behavior.

Creating or Improving Access to Places for Physical Activity

- Involve the efforts of worksites, coalitions, agencies, and communities in attempts to change the local environment to create opportunities for physical activity.
- Create walking trails, build exercise facilities, or provide access to existing nearby facilities.
- Train participants to use the equipment and offer health behavior education, risk factor screening, referrals to physicians or additional services, health and fitness programs, and support or buddy systems.

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Interventions with Insufficient Evidence

Classroom-based health education focused on information provision—

Variable effectiveness was found for increasing physical activity outside the school setting.

Mass media campaigns—

In general there was a modest trend toward increasing physical activity, especially in those most sedentary.

Health education with TV/ Video game turnoff component—

The primary outcome of interest was decreasing the amount of time spent watching TV or playing video games. There were inconsistent results in the increase of physical activity with two measures showing increases and four measures showing decreases.

College-age physical education/health education—

Lead to short-term increases in physical activity and aerobic capacity, but most participants return to baseline activity and do not sustain the behavioral change in the long term.

Family-based social support—

Those interventions that were part of a school-based program were slightly more successful than independent interventions. The results were inconsistent with some reporting increases in physical activity and others reporting decreases.

Transportation policy and infrastructure changes to promote non-motorized transit; Urban planning approaches – zoning and land use—

Currently undergoing evaluation. These interventions include creating a structure for walking and biking with

sidewalks and bike lanes; using techniques that slow traffic and make the streets safer for pedestrians and bicyclists (like creating raised sidewalks, traffic circles, and narrowing streets at intersections); creating walking and biking routes for safe biking and walking to school; creating walkable neighborhoods and locating businesses where people would be likely to walk like near bus or train stations; creating walkways through neighborhoods leading to parks, businesses and offices; revitalizing struggling downtowns and neighborhoods that already have walkable and bikeable areas; combining all these environmental changes with public education about their use and the need for increasing physical activity.⁵

Adapted from the following documents: Centers for Disease Control and Prevention Technical Assistance Manual for State Nutrition and Physical Activity Programs to Prevent Obesity and Other Chronic Diseases; Evidence Based Practices for Overweight and Obesity: A Review of the Literature, Glenda Nickell, Sinclair School of Nursing, University of Missouri-Columbia, 2003; Missouri Department of Health and Senior Services Draft Obesity Burden Report, 2004.

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⁴US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity. *Promoting Physical Activity: A Guide for Community Action*. Champaign, IL: Human Kinetics, 1999.

⁵*Promoting Active Transport: An Intervention Portfolio to Increase Physical Activity as a Means of Transport*. National Public Health Partnership, August 2001. (For copies, contact the National Public Health Partnership Secretariat, 589 Collins Street, Melbourne 3000, Vic, Australia. telephone: (613) 9616-1515. website: www.nphp.gov.au)

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